

What is claimed is:

1. An autoclave for curing a tread strip to a tire casing with heated, pressurized air, comprising:

an elongated chamber having a frame for supporting tire casing and tread assemblies within the chamber;

a heat exchanger for heating air;

a supply duct defined by a wall having an inlet and an outlet at opposite ends,

an air circulating system for circulating air as a flow through the chamber, heat exchanger, and the supply duct; and

air flow turbulence generators disposed in the chamber in a main air flow.

2. The autoclave as claimed in claim 1, wherein the air flow turbulence generators comprise at least one aperture formed on the wall of the supply duct to guide air from the duct into the chamber in a direction disruptive to the main air flow in the chamber.

3. The autoclave as claimed in claim 2, wherein the at least one aperture is formed at a midpoint of the main air flow in the chamber.

4. The autoclave as claimed in claim 2, wherein the at least one aperture includes a louver formed on the wall of the chamber to guide air from the supply duct.

5. The autoclave as claimed in claim 2, wherein the apertures comprise at least one nozzle communicating with the supply duct to guide air into the chamber in a direction disruptive of the main air flow in the chamber.

6. The autoclave as claimed in claim 1, wherein the air flow turbulence generators comprise at least one air deflector disposed on a wall defining an interior of the chamber.

7. The autoclave as claimed in claim 6, wherein the at least one deflector is disposed in a middle third portion of the air flow path in the chamber.

8. The autoclave as claimed in claim 6, wherein the at least one deflector is a fin.
9. The autoclave as claimed in claim 6, wherein the at least one deflector is a wedge-shaped element.
10. The autoclave as claimed in claim 6, wherein the at least one deflector is a vane.